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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re U.S. Patent No.: 6,142,927)

Inventor: James Hoyt Clark)

Serial No.: 09/152,195)

Issued: November 7, 2000)

Filed: September 14, 1998)

Prior Reexam Certificate: 5824th)

Reexamination Control: 90/008,777)

Art Unit: 3993)

Reexamination Examiner: Jeanne M. Clark)

Title: METHOD AND APPARATUS FOR)

TREATMENT WITH RESONANT)

SIGNALS)

**REPLY BRIEF OF
APPELLANT PATENT OWNER**

**REPLY BRIEF OF APPELLANT PATENT OWNER
IN RESPONSE TO EXAMINER'S ANSWER**

Pursuant to 37 CFR § 41.41, Patent Owner submits this Reply Brief in response to the Examiner's Answer mailed on September 3, 2009, the two month period for this Reply expiring on November 3, 2009. This Reply Brief is in regard to the Patent Owner's Appeal of the Decision of the Central Reexamination Unit Examiner dated December 5, 2008.

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TABLE OF AUTHORITIES

Case Authority

1. *KSR International Co. v. Teleflex Inc. et al.*, 04-1350 (U.S. 4-30-2007), 127 S.Ct. 1727.
2. *In re Garfinkel*, 437 F.2d 1005 (C.C.P.A 1971), 168 USPQ 662, 665.
3. *In re Yale*, 434 F.2d 666 (1970), 168 USPQ 46

Regulations

1. 37 C.F.R. § 41.41

I. General Reply.

Patent Owner believes that the issues before the Board of Patent Appeals and Interferences in this appeal are adequately framed by the Patent Owner's Appeal Brief and the Examiner's Answer. Patent Owner will therefore confine his reply to specific content of the Examiner's Answer. By failing to specifically respond to each point raised by the Examiner in the Examiner's Answer, the Patent Owner is not conceding the issue but merely is content to rely upon the Appeal Brief.

II. Argument.

A. Rejection Under §112 (Ground 1). Claims 1-8, 13-25, 30-43, 48-55, 60-72, and 77-86 have been rejected by the examiner under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

The issue presented here, simply stated, is whether a person of ordinary skill in the art at the time the application for the patent at issue was filed in 1998, would have understood the term "radio frequency transmitter" to include at least a traditional modulation transmitter such as an AM transmitter, an FM transmitter, or a PM transmitter. The examiner has adopted the Requester's definition of the term "radio frequency transmitter" as being "a thing that sends out a signal having a frequency between about 1kilohertz and 1 gigahertz either by radio waves or

over a wire.” (See Examiner’s Answer, pages 7, 24 and 27) The Examiner acknowledges that the definition adopted by the Examiner is a “broader” interpretation, and is indeed the “broadest reasonable interpretation”. *Examiner’s Answer, page 7, 24 and page 27.* Patent Owner respectfully asserts that if the Examiner’s definition is applicable, it is clear then that a traditional radio frequency transmitter, i.e., a modulation transmitter, falls within the scope of this definition. The Affidavit of Dr. Metin Gunsay, Ph.D., submitted with the Patent Owner’s August 23, 2008 Response to Office Action, includes the following:

12. While a person of ordinary skill in the art could conclude that the term “radio frequency transmitter” could include a broad interpretation of the term, which could include any device which is capable of emitting, in conjunction with an antenna, an electromagnetic signal with a frequency in the radio frequency spectrum, this term would have been primarily understood by a person of ordinary skill in the art to mean a traditional radio frequency transmitter, such as an AM transmitter, an FM transmitter or a PM transmitter.

The question then is whether the term “radio frequency transmitter” as used in the specification and in the original claims is taken to mean a traditional modulation transmitter which has been known by persons of ordinary skill in the art for decades, or is to be interpreted to have a broader meaning such as that

suggested by Requester and apparently adopted by the Examiner. In any event, by amending the claims to add the additional clarification, if the narrower definition of a radio frequency transmitter is to be applied, or an additional limitation, if the broader definition suggested by the Requester and apparently adopted by the Examiner is to be applied, the term “radio frequency transmitter” would be understood by a person of ordinary skill in the art to include at least a traditional modulation transmitter.

The Examiner states:

Therefore, the disclosure of the ‘927 is not clear on where the modulation of the signal occurs and is likely that the modulation occurs outside of the confines of the RF transmitter. See Fig. 1 and column 7 lines 62-67, which states that the product signal, which is received by the transmitter 42, is a series of wave forms of changing voltage. *Examiner’s Answer, page 7.*

The Examiner seems here to be confusing the variations in voltage of the therapeutic signals and the modulation of the therapeutic signals for application purposes by the RF transmitter. See *Gunsay Affidavit* ¶¶14, 16. A traditional radio frequency transmitter receives an information signal (for the present invention a therapeutic signal) and modulates that signal onto a carrier signal for transmission purposes. A person of ordinary skill in the art would unequivocally understand this transmission process for the transmission of the therapeutic signals

using a traditional radio frequency transmitter. *See Gunsay Affidavit* ¶12.

Therefore, in summary, whether the term “radio frequency transmitter” would be understood by a person of ordinary skill in the art to have a broader meaning than a traditional modulation transmitter, the term would be understood by a person of ordinary skill in the art to include at least a traditional modulation transmitter. Hence, the addition of the clarification or limitation “wherein the radio frequency transmitter comprises a modulation transmitter” would be understood by a person of ordinary skill in the art to be included within the disclosure of the specification through the use of the term “radio frequency transmitter”.

The Examiner has asserted three bases for an assertion that the term “radio frequency transmitter” does not include a modulation transmitter.

1. The specification and drawings do not have explicit support for patent owner’s definition;
2. The patent owner has made remarks on the record, which do not seem consistent with their definition; and
3. The extrinsic evidence does not provide clear support for patent owner’s definition. (*See Examiner’s Answer, page 21*)

In regard to the first of these assertions, i.e., an alleged lack of support in the disclosure of the ‘927 patent, it is Patent Owner’s position that the use of the term

“radio frequency transmitter” has a plain meaning which would be understood by a person of ordinary skill in the art. *See Gunsay Affidavit* ¶12. Either it is deemed to have the broad definition such as that suggested by the Requester and adopted by the Examiner or a narrower definition i.e., a modulation transmitter. As noted in Patent Owner’s Appeal Brief, the definition of “transmitter”, included in Appendix C to Requester’s Reply to Patent Owner’s Statement in the present reexamination, from Merriam-Webster’s Collegiate Dictionary, 10th Edition, published in 1998, is “an apparatus for transmitting radio or television signals”. See Appendix B, Evidence Appendix, item 4. Similarly, the definition of “transmitter” from a current dictionary, The American Heritage® Dictionary of the English Language, Fourth Edition, published in 2006, defines a “transmitter” as “an electronic device that generates and amplifies a carrier wave, modulates it with a meaningful signal derived from speech or other sources, and radiates the resulting signal from an antenna”. In any event, it is uncontroverted that a person of ordinary skill in the art would have understood this term to include, at least, a traditional radio frequency transmitter, such as an AM transmitter, an FM transmitter, or a PM transmitter. *See Gunsay Affidavit*, ¶12. *See also Examiner’s Answer, pages 7, 24 and 27.*

In regard to the second basis stated by the Examiner, that “ [t]he Patent

Owner has made remarks on the record, which do not seem consistent with their definition”, Patent Owner confesses to not clearly understand the argument of the Examiner with regard to this assertion. Examiner points to a statement by the Patent Owner that “it is well known in the art that a radio frequency transmitter generates a carrier wave in the radio frequency spectrum” This is a correct statement. A carrier wave is the wave upon which an information signal is modulated by a traditional radio frequency transmitter. A carrier wave in the radio frequency spectrum is in fact generated by a radio frequency transmitter, which has the information signal modulated thereon. Patent Owner is certainly not suggesting that a FM transmitter, which is well known in the prior art, is not a modulation transmitter. The Patent Owner has merely unequivocally and uncontrovertedly stated that no version of the LISTEN System incorporated a FM transmitter, i.e., a transmitter generating a radio frequency carrier wave with an information signal frequency modulated thereon.

The Examiner argues that,

In other words, if the plain meaning of the term inherently means that a radio frequency transmitter must include a modulation transmitter, the amendment adding the limitation that it comprises a modulation transmitter would be redundant and certainly would not limit the

scope of claims.

As stated previously, if the meaning of the “radio frequency transmitter” is to be deemed to be broader than the traditional modulation type radio frequency transmitter, as suggested by Requestor and adopted by the Examiner, then the addition of the amendment to the independent claims, “the radio frequency transmitter comprising a modulation transmitter” would comprise an additional limitation if the term “radio frequency transmitter” were deemed to have a narrow definition, i.e., that of a traditional modulation type radio frequency transmitter, then the amendment would simply be a clarification.

The third basis stated by the Examiner for the §112 rejection is that “the extrinsic evidence does not provide clear support for Patent Owner’s definition”. The Examiner seems to argue on the one hand that the term “radio frequency transmitter” may be interpreted to have a broader meaning than a traditional modulation type radio frequency transmitter while on the other hand suggesting that it is not necessarily true that a traditional modulation type radio frequency transmitter would be included within this broad definition. As noted above, the Examiner appears to have adopted the Requester’s definition of the term “radio frequency transmitter” as being “a thing that sends out a signal having a frequency

between about 1 kilohertz and 1 gigahertz either by radio waves or over a wire.”

Examiner’s Answer, pages 7, 24 and 27. For the Examiner then to take the position that a traditional modulation type radio frequency transmitter would not be included within that broad definition is insupportable and is inconsistent with the understanding of a person of ordinary skill in the art. Indeed, the Examiner quotes paragraph 12 from the Gunsay Affidavit which is presented on page 4 above.

Dr. Gunsay verifies that a person of ordinary skill in the art would have known that the term “radio frequency transmitter” would have included at least a traditional modulation type radio frequency transmitter. Therefore, the clarifying or limiting amendment to the independent claims wherein the language “the radio frequency transmitter comprising a modulation transmitter” is added, would ensure that the scope of the independent claims is within the disclosure of the specification, whether a broad interpretation or narrow interpretation of the term radio frequency transmitter applies.

The Examiner’s rejection of Claims 1-8, 13-25, 30-43, 48-55, 60-72 and 77-86 under 35 U.S.C. §112 is therefore unfounded.

B. Rejection Under §103(a) (Grounds A1, A2, A4, A5, A6 and A8)

Claims 108, 13-25, 30-43, 48-55, 60-72, and 77-86 have been rejected by

the Examiner under 35 U.S.C. §103(a) as being obvious over the following references:

Ground A1: LISTEN Manual in view of the 1996 C.E.D.S. News Publication, and as further evidenced by the “background and progress report” by Barbara Brewitt, which was an attachment to the letter concerning the CNERs report, dated March 14, 1994.

Ground A2: LISTEN manual in view of the 1997 C.E.D.S. News publication, and as further evidenced by the "Background and Progress Report" by Barbara Brewitt, which was an attachment to the letter concerning the CNERs Report, dated March 14, 1994.

Ground A4: LISTEN Manual in view of the 1996 C.E.D.S. news publication, or alternatively, the 1997 C.E.D.S. news publication, as further evidenced by the “Background and Progress Report” by Barbara Brewitt, which was an attachment to the letter concerning the CNERs Report, dated March 14, 1994, and further in view of the Carbohydrate Metabolism Study Plan or alternatively the Dental Study Plan.

Ground A5: LISTEN Manual in view of U.S. Patent No. 5,626,617 to Brewitt and the 1996 C.E.D.S. news publication, and as further evidenced by the “Background and Progress Report” by Barbara Brewitt, which was an attachment

to the letter concerning the CNERS Report, dated March 14, 1994.

Ground A6: LISTEN Manual in view of U.S. Patent No. 5,626,617 to Brewitt and 1997 C.E.D.S. news publication, as further evidenced by the “Background and Progress Report” by Barbara Brewitt, which was an attachment to a letter concerning the CNERS Report, dated March 14, 1994.

Ground A8: LISTEN Manual in view of U.S. Patent No. 5,626,617 to Brewitt and the 1996 C.E.D.S. news publication, or alternative, the 1997 C.E.D.S. news publication, as further evidenced by the “Background and Progress Report” by Barbara Brewitt, which was an attachment to the letter concerning the CNERS Report, dated March 14, 1994 and further in view of the Carbohydrate Metabolism Study Plan or alternatively the Dental Study Plan.

In summary, the extrinsic evidence referred to by the Examiner from the foregoing references is as follows:

1. The LISTEN Manual teaches a version of the LISTEN System having an EM Transmitter.
2. The 1996 C.E.D.S. News Publication teaches (erroneously) that the LISTEN System uses a FM Transmitter.
3. The 1997 C.E.D.S. News Publication teaches (erroneously) that the LISTEN System uses a FM Transmitter.

4. “Background and Progress Report” by Barbara Brewitt teaches that a LISTEN System user can select one of four methods to transmit the signal, one of which is “ 3. Through an antenna that produces an rf signal”.
5. The Carbohydrate Metabolism Study Plan teaches the use of an antenna by the LISTEN System to transmit signals.
6. The Dental Study Plan teaches the use of an antenna by the LISTEN System to transmit signals.
7. U.S. Patent No. 5,626,617 to Brewitt teaches that the LISTEN System can be used to administer radio frequency signals.

Patent Owner has specifically addressed each of the Grounds for Rejection under §103(a) in the Appeal Brief and therefore those detailed arguments will not be repeated here.

The fundamental issue which arises under each of the Grounds is essentially the same. Patent Owner respectfully asserts that the references cited under Grounds A1, A2, A4, A5, A6 and A8, together with the intrinsic and extrinsic evidence cited by the Examiner and the Patent Owner establish the following:

1. One version of the LISTEN System incorporated a wire loop antenna attached to the serial output circuit of the LISTEN circuit board.

Gunsay Affidavit ¶¶6-7.

- 2 That version of the LISTEN System provided for the digital sequence of certain product signals, which amounted to a variable voltage square wave sequence, to be applied to the wire loop antenna.

Gunsay Affidavit ¶¶14,16.

3. Although the nature of any electromagnetic radiation generated by applying the variable voltage square wave pattern to the wire loop antenna is unknown, the resultant electromagnetic radiation, was referred to in the cited references as an electromagnetic signal (an EM signal), or, in some cases, erroneously as an FM signal. *Gunsay Affidavit ¶¶14-18.*

4. No version of the LISTEN System incorporated a “radio frequency transmitter” as the term would have been primarily understood by a person of ordinary skill in the art, i.e., a modulation transmitter such as an AM, a FM, or a PM transmitter. *Gunsay Affidavit ¶¶6-11.*

5. No version of the LISTEN System provided for frequency modulation of any therapeutic signal onto a carrier wave, i.e., no version of the LISTEN System generated or applied an FM signal. *Gunsay Affidavit ¶¶9-11. Clark Affidavit ¶¶ 11-24.*

6. References to the LISTEN System as utilizing a radio frequency transmitter and, in particular, a FM transmitter, were undisputedly in error. The Examiner has provided no contradictory evidence.

Gunsay Affidavit ¶¶6-18.

7. The nature of the signal produced by a variable voltage square wave being applied to a wire loop antenna such as that incorporated in a version of the LISTEN System would be fundamentally different than the signal from a traditional radio frequency transmitter wherein a carrier wave was modulated by the therapeutic signal of the present invention for application “to a desired area of application on a human body of a treatment subject.” *See independent claims 1, 17, 48 and 64. Gunsay Affidavit ¶¶14-18.*

It appears that the Examiner takes the position that because the generation of a square wave pattern for a product signal is disclosed by the LISTEN System Manual and the use of a modulation transmitter is known in the art, that it is obvious to modulate a square wave product signal disclosed by the LISTEN System Manual on a carrier wave for the administration of that modulated signal on a desired area of application of the human body for therapeutic purposes. The Affidavit of Dr. Metin Gunsay, Ph.D., ¶13, and the Affidavit of the Patent Owner,

James Hoyt Clark, ¶ 19, teach to the contrary. As noted previously, James Hoyt Clark is also the inventor of the LISTEN System.

Patent Owner also respectfully asserts that it has been unequivocally demonstrated that any references to the LISTEN System having a radio frequency transmitter or in particular an FM transmitter are clearly erroneous. The undisputed affidavit of the Patent Owner as inventor of the LISTEN System as well as the inventor of the invention of the present patent verifies that one version of the LISTEN System merely contained a wire loop antenna attached to the serial output circuit of the LISTEN System circuit board. It did not contain a radio frequency transmitter. *See Gunsay Affidavit ¶¶ 7-18 and Clark Affidavit ¶¶ 15-21.* Dr. Gunsay examined an exemplar of the LISTEN System circuit board which incorporated the wire loop antenna and verified that no radio frequency transmitter was included in the circuit. *Gunsay Affidavit, ¶¶ 7-12.*

The Examiner takes the position that the erroneous references are nevertheless valid references in this case on the question of obviousness. *See Examiner's Answer, pages 30-31.* The Examiner cites *In re Garfinkel*, 437 F.2d 1005 (C.C.P.A 1971), 168 USPQ 662, 665, and *In re Yale*, 434 F.2d 666 (1970), 168 USPQ 46. Patent Owner respectfully disagrees. The erroneous glass making formula allowed as a reference in *Garfinkel* stated that the percentage of Al_2O_3 in

the glass was 5.12% while the actual percentage was only about 2%. The range of Al_2O_3 in the application at issue was 5-25%. The Court determined that the erroneous disclosure “would teach one of ordinary skill in the art to use up to 5.12% since the error, if it exists, is not apparent or obvious from reading the publication.” However, the Court went on to say that “ the disclosure of Dr. Kistler of glasses containing small amounts of Al_2O_3 made obvious the use of glasses containing Al_2O_3 irrespective of the percentage.” That is not the situation in the instant case. The references at issue here, namely the 1996 C.E.D.S. News Publication and the 1997 C.E.D.S. News Publication were not erroneous quantitatively, they noted a hardware requirement for the LISTEN System which contradicts the description of the device contained in the LISTEN System Manual itself. Further, following the Court’s reasoning in *Yale*, a person of ordinary skill in the art would not have been prompted by these references to make a LISTEN System with a FM Transmitter. The version of LISTEN which purported to apply an electromagnetic wave did so with a wire loop antenna attached to the serial output circuit of the LISTEN System circuit board. “The public is not put in possession of . . .” a LISTEN System incorporating a FM Transmitter by these references. *Yale* at 668-669.

Both the signal generated and the structure are substantially different for the LISTEN System and the device of the present invention. The signal generated by the LISTEN System is an EM signal of unknown form generated by applying the variable square wave product signals of LISTEN to the wire loop antenna of LISTEN. The signal of the present invention is a radio frequency carrier wave with the therapeutic signal of the present invention modulated thereon. The structure of the LISTEN System merely incorporates a wire loop antenna attached to the serial output circuit of the LISTEN System circuit board. For the embodiments of independent Claims 1, 17, 48 and 64, the serial output circuit of the present invention is attached to a traditional radio frequency transmitter, i.e., a modulation transmitter, wherein the therapeutic signals are modulated onto a carrier wave for application to the desired area of the body of a treatment subject.

Thus, the ultimate issue presented by the Examiner's rejection of these claims under §103(a) is whether the substantial differences in the signal produced and the substantial differences in the structure between the LISTEN System and the device and method of the present invention renders the present invention non-obvious. Patent Owner respectfully asserts that it does. While the technology and devices of traditional radio frequency transmitters are well known in the art and

have been in wide use for many years for communication purposes, the use of a traditional radio frequency transmitter as a component of a therapeutic device, i.e., for the application of a therapeutic signal to a desired area of application on the body of a treatment subject, is not known in the art. As verified by Dr. Gunsay, such a use of a traditional radio frequency transmitter was not obvious to a person of ordinary skill in the art. *Gunsay Affidavit*, ¶13.

The examiner asserts that Patent Owner and declarant Metin Gunsay, Ph.D., have recognized that use of modulating transmitters were well known in communication technology. That is certainly true. However, the use of modulating transmitters in a therapeutic device was not obvious. While it might have been obvious in 1998 when the application for the '927 patent was filed, to use a modulating transmitter to transmit a communication signal, the use of a traditional radio frequency transmitter, i.e., a modulating transmitter, to apply the therapeutic product signal of the present invention to a “desired area of application” on the body of a subject would not have been obvious in view of the LISTEN device having an antenna connected to the serial output circuit of the LISTEN System circuit board and the prior art references cited. *See Gunsay Affidavit*, ¶ 13.

The U. S. Supreme Court has stated in *KSR International Co. v. Teleflex*

Inc. et al., 04-1350 (U.S. 4-30-2007), 127 S.Ct. 1727 (pg. 14-15).

As is clear from cases such as *Adams*, a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known. (emphasis added)

In accordance with the foregoing opinion of the Court in *KSR International*, the combination of a radio frequency transmitter- a modulation transmitter, with a device which generates the product signals of the present invention, even if it relied “upon known building blocks long since uncovered” does not render the invention unpatentable. Indeed, the present inventor and Patent Owner, and the inventor of the LISTEN System, James Hoyt Clark, has verified in his affidavit of February 16, 2008, that he had not identified the efficacy of using a radio frequency transmitter- a modulation transmitter, for applying the product signals

of the present invention to the desired area of application of the body of a human subject. Clark Affid., ¶ 19. Therefore, the combination of the teachings of the references and the known use of a modulating transmitter in a related technology would not have rendered claims 1, 17, 48 or 64 obvious to one of ordinary skill in the art at the time the invention was made.

III. Conclusion

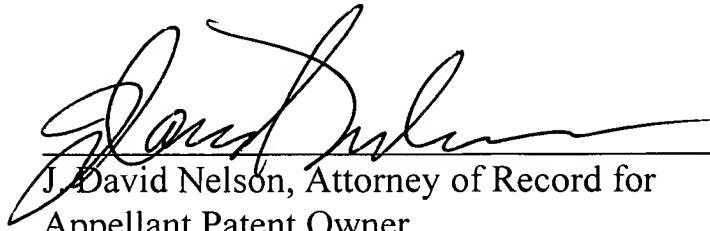
The term “radio frequency transmitter” would have been understood by a person of ordinary skill in the art at the time of the filing of the application for the present invention to mean or at least to include an AM, FM, PM or other modulation transmitter. The §112 rejection is unfounded.

While it might have been obvious to use a modulating transmitter to transmit a communication signal, the use of a traditional radio frequency transmitter, i.e., a modulating transmitter, to apply the therapeutic signal of the present invention to a “desired area of application” on the body of a subject would not have been obvious in view of the LISTEN device having an antenna connected to the serial output circuit of the LISTEN System circuit board and the other prior art references cited.

The Examiner’s decision should be REVERSED.

Dated this 3rd day of November, 2009.

Respectfully submitted,
NELSON SNUFFER DAHLE & POULSEN, P.C.

A handwritten signature in black ink, appearing to read "J. David Nelson", is written over a horizontal line.

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